DOCUMENT RESUME

ED 426 590 FL 025 414

AUTHOR Tella, Seppo
TITLE An "Uneasy Alliance" of Media Education and Multiculturalism, with a View to Foreign Language Learning Methodology. OLE Publications 4.
INSTITUTION Helsinki Univ., (Finland). Dept. of Teacher Education.
ISBN ISBN-951-45-7588-1
ISSN ISSN-1238-9722
PUB DATE 1997-00-00
NOTE 71p.
AVAILABLE FROM Department of Teacher Education, P.O. Box 38 (Ratakatu 6 A) 00014 University of Helsinki, Finland.
PUB TYPE Reports - Descriptive (141)
EDRS PRICE MF01/PC03 Plus Postage.
DESCRIPTORS Classroom Techniques; *Computer Assisted Instruction; Cross Cultural Training; Distance Education; *Educational Technology; Educational Trends; Foreign Countries; Information Networks; *Multicultural Education; *Multimedia Instruction; *Second Language Instruction; Second Languages; Teaching Methods; Trend Analysis

ABSTRACT

This booklet discusses the growing interrelationship between multicultural education and technologically defined media education. First, literature on multicultural education is reviewed, and five separate approaches are identified: human relations; teaching the culturally different; cultural democracy; single-group studies; and multicultural and social reconstructionist education. Next, varieties of media-based instruction are examined: computer-based education; network-based learning; distance education; open learning; and various levels and forms of technology used. Some basic trends within multimedia language instruction are discussed, including the historical convergence of language teaching and instructional media, the shift in emphasis from computer-assisted teaching to computer-enhanced learning, and shifts in the language teacher's role. Related issues being explored by the profession are also noted, including consideration of learning environment, quality of input, quality of communication, the concept of the structure of language, errors, and quality of learning. The booklet concludes by discussing the relationship of various technologies to meaningful language learning. (Contains 88 references.) (MSE)

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Seppo Tella

An 'Uneasy Alliance' of Media Education and Multiculturalism, with a View to Foreign Language Learning Methodology

University of Helsinki
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Helsinki 1997

ISBN 951-45-7588-1
ISSN 1238-9722
Hakapaino
1997

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Preface

The OLE Publications Series of the Department of Teacher Education was created in late 1995 in order to give a forum for teachers and researchers to publish articles in English, French or German on themes and topics connected to **the OLE Project** (Open and Distance Learning in Teacher Education to Promote the European Dimension) coordinated by the Department of Teacher Education, University of Helsinki.

The OLE Publications series consists of articles dealing with media education, modern information and communication technologies (MICT), telematics, computer-mediated human communication (CMHC) and comparative education with a special view to the European Dimension.

At present, the series combines the interest areas of OLE and another European Union Open and Distance Learning (ODL) project called **APPLAUD** (A Programme for People to Learn At University-level at a Distance), also coordinated by the Department of Teacher Education of the University of Helsinki.

The present volume focuses on three converging areas of research: media education (ME), multiculturalism (MC) or multicultural education, and foreign language learning methodology (FLL). The purpose of this volume is to look for different ways of seeing the three in a common framework. My initial inspiration was born from Roblyer, Dozier-Henry & Burnette's article (1996, see References) in which

they analyse technology and multicultural education. As I had been working on similar lines for years but also had a special emphasis on foreign language teaching and learning, it seemed natural to try to "triangulate" the three areas in one article.

I am most grateful for having the chance to add this article to the present series of the Department of Teacher Education. I hope this article will contribute to the full utilisation of both media education and multiculturalism in foreign language learning methodology.

My gratitude to Mr **Kari Perenius** for putting the final touches to the technical side of the publication.

Helsinki, March 31, 1997

Seppo Tella
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His main areas of research focus on analysing the concept of telelogically defined media education, modern information and communication technologies (MICT), telematics and open and distance learning (ODL), CALL (computer-assisted language learning), CELL (computer-enhanced language learning) and foreign language learning methodology. Professor Tella is also responsible for initial (preservice) and inservice teacher education courses at the Department.

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An 'Uneasy Alliance' of Media Education and Multiculturalism, with a View to Foreign Language Learning Methodology

Seppo Tella

"We should not be blinded by our localized ethnic issues when we talk about multiculturalism, but look beyond ... and embrace the cultures of the world ... They're only an e-mail message away!" (Winfrey 1995; cited in Roblyer, Dozier-Henry & Burnette 1996, 5)

The purpose of this article is to explicate the subtle yet growing interrelationship between multiculturalism (MC) or multicultural education and telelogically defined media education (ME), focusing on modern information and communication technologies (MICT). The substance area in question is foreign language learning (FLL) methodology, which no doubt can profit from the fusion of the converging trends regarding media education and multiculturalism.

An increasingly and steadily growing number of high-profile FL teachers and teacher educators are becoming cognisant of the fact that in order to know more of the synergy created by the interaction between MC, ME and FLL, they should keep up with the latest developments. These teachers also understand that both ME and MC are far from being isolated on the periphery of the curriculum; rather, they are gaining ground. In addition, ME in its various forms is already anchored firmly within the FL curriculum in terms of both content and competencies in many places.

Keywords: Media education; multiculturalism; multicultural education; foreign language learning methodology; modern information and communication technologies; open and distance learning; distance education.

1. BACKGROUND

1.1 From a Sideline Role to the Centre Stage

When we look into the recent past of foreign language learning, it seems obvious that multicultural emphases have had a strong influence on its content and methodology. Yet, at the same time, various technologies have also risen from a sideline role towards the centre stage or, as Roblyer, Dozier-Henry & Burnette (1996, 5) put it, "After long years of serving little more than a sideline role in education, technology tools and methods (especially computer-based ones) have moved at last to center stage".

At the same time it has become important to start analysing the general impact of technology on MC. In the FL literature, not much research has been conducted on this perspective, and, on the whole, one can share Roblyer, Dozier-Henry & Burnette's (1996, 9) opinion that few if any comprehensive studies are available, though there is some evidence that technology has made a difference in some ways. The purpose of this article is to shed some light on the interlinked characteristics of these topics that are of extreme importance to the development of FLL theory and practice.

1.2 An Uneasy Alliance or a Marriage Tied in Heaven?

Many FL teachers still believe they can do without ME or MC. To some ME and MC are foreign and to others nothing less than anathema. These hesitant attitudes towards combining either FLL and ME or ME and MC are reflected in expressions like "An Uneasy Alliance" (Roblyer, Dozier-Henry & Burnette 1996) or "Harmony or Hell?" and "A Perfect Match?" as used somewhat ironically by Tella (1996a; 1996b).

These attitudes are understandable in relation to what was available earlier. In the early 1980s, the majority of com-

puter-based educational software ("courseware") intended for the teaching of foreign languages was drill and practice type of activities, which infrequently formed larger entities for teaching purposes. For instance Evans & Collis (1987; referring to Collis & Green 1984a, 1984b) reported that approximately 85 % of commercially published materials could be classified as drill and practice. Most language programs were planned, written, and programmed by other people than language educators. This resulted in products, whose methodological basis represented an old-fashioned and mechanistic view of the language teaching/learning process. The situation grew better when the development of CALL coincided with communicative methodology (Johns 1991, 21).

However, an increasingly and steadily growing number of high-profile FL teachers and teacher educators are becoming cognisant of the fact that they should know more of these two areas in order to keep up with the latest developments. These teachers also understand that both ME and MC are far from being isolated on the periphery of the curriculum; rather, they are gaining ground. In addition, ME in its various forms is already anchored firmly within the FL curriculum in terms of both content and competencies in many countries.

As to ME, Considine (1995) offers an interesting viewpoint by contending that new technologies already represent a new type of curriculum that has moved learning from school to outside-of-school situations:

> "While our schools continued to acquire more VCRs, computers, and other visual technologies, little was being done to address the way these technologies functioned as *surrogate teachers beyond the classroom*. ... The fact that these new technologies represent a new curriculum, requiring new competences and a new definition of how and where learning takes place, has for the most part been ignored." (Considine 1995, 32)

The FL teachers' relation to technology is an issue fundamentally concerned with epistemological, ontological and axiological questions, which are not always explicitly expressed when discussing the pros and cons of various representations of media education.

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This article intends to compare MC and ME together with FLL methodology. First, MC will be briefly defined. ME will be analysed through a couple of synthetic classifications (Chapters 2 and 3). Second, some general megatrends about shifts in emphasis are depicted (Chapter 4). Third, concrete examples are given from the crossroads of these two trends with respect to FLL (Chapter 5). Finally, meaningful learning and various technologies are reviewed in retrospect (Chapter 6).

2. MULTICULTURALISM OR MULTICULTURAL EDUCATION

2.1 Definitions and Prerequisites

Most researchers agree that definitions of multiculturalism (MC) or multicultural education abound while terminology varies to some extent. Some embrace issues of worldview (e.g., Kilbourne 1984), others focus on multicultural literacy (like Banks 1991) or various genres of cross-cultural communication. Yli-Renko (1996, 58), for instance, speaks of intercultural communication proficiency as an aim of FLL and argues that intercultural communication has become the most important challenge to foreign language teaching and teacher education. In Yli-Renko's analysis (1996), when considering the various theories on intercultural communication, consensus has been reached at least on two fundamental propositions: (i) intercultural communication occurs whenever the message producer is a member of one culture, and the message receiver is a member of another, and (ii) language and culture are inseparable and learned, and both of them transmit beliefs, values, perceptions and norms. Language expresses thinking behind the culture as well as its worldviews. Language is the fundamental condition of a culture, and culture is an integral part of interaction between language and thought. (Yli-Renko 1996, 58)

Yli-Renko (1996) has summarised some of the intrinsic features we need in order to communicate effectively with people of different cultural backgrounds. In her opinion, for instance, "we have to understand, appreciate and accept individual and cultural differences and have insights into the communication partner's feelings and characteristics" (Yli-Renko 1996, 59).

The necessity to talk of and to teach MC is oftentimes (see e.g., Appelbaum & Enomoto 1995, 50) pointed back to the belief that most "preservice teachers are not developmentally able to comprehend and grapple with the issues and dilemmas of education in a multicultural society".

2.2 Five Approaches

In this article, we will rely on the five approaches to MC as categorised by Sleeter (1991) and elaborated slightly further by Appelbaum & Enomoto (1995, 51). The five approaches are as follows: (1) human relations; (2) teaching the culturally different; (3) cultural democracy; (4) single-group studies, and (5) education that is multicultural and social reconstructionist.

2.2.1 Human Relations

The following analyses are mainly based on Appelbaum & Enomoto's (1995, 51) interpretation of these approaches, starting from sensitivity training, aiming at fostering understanding of differences among people so as to resolve interpersonal conflicts (Approach 1). The problem, however, is that group-focused issues may be reduced to interpersonal conflicts instead of contextualising interpersonal relations within group issues. Yli-Renko (1996) analyses human relations as follows:

> "The aims of teaching human relations include such skills as the capacity for co-operation, empathy, positive self-concept, responsibility for oneself, other people and the environment. Responsibility appears in personal relations, studies, work and all the other aspects of life. Independence along with responsibility is defined as the basis for civil courage. From the point of view of intercultural communication, independence appears in critical and unprejudiced thinking and recognition of stereotypes and unjust economical and political structures." (Yli-Renko 1996, 59)

2.2.2 Teaching the Culturally Different

The second approach is connected to removing inequities associated with group differences, i.e. trying to eliminate gender differences in participation and in performance. This approach is also linked to technological or computer inequity in the area of ME (cf. e.g., Tella 1992a).

Two terms frequently used in this connection are *equity* and *equality*. In general parlance, *equity* refers to fairness or right judgement, whereas *equality* refers to the sameness in size, amount, number, degree, value, etc. In educational parlance as well, they are kept apart and not regarded as synonyms. Sutton (1991), for instance, basing her definition on Secada (1989), refers to equity as a qualitative property, referring to judgements regarding justice, while equality is considered a quantitative property describing parity among groups along some index (e.g., access to computers, attitudes towards computers). *Computer inequity* is defined by Anderson, Welch & Harris (1984; cited by King 1987, 12) as unequal access to computer learning as consequences of students' social and economic positions. In King's view (1987), *computer equity* is broader than mere access to computers and must account for *how* computers are used when implementing the curriculum. Equity is concerned with identifying which students have opportunities for learning *about* computers (i.e., gaining literacy and programming skills) as well as *with* computers (i.e., using them as tools for learning and problem solving). Issues connected to equity/inequity become important as soon as students, their parents, and teachers realise what sort of educational and economic benefits there are for those students who master the capabilities of computers. (King 1987, 12)

The issue of equality also means equality of opportunities in terms of students' interests and language needs, which implies a close correlation with the curriculum to be implemented. Wheldall, Merrett & Houghton (1989) phrase this requirement as follows:

> "(...) most of what pupils do in school should appeal, should be exciting and should have obvious value for them, even if not in the immediate future. If the curriculum they are led to follow is without some excitement, some challenge, some enjoyment and if it does not aim eventually at the pupils' ultimate and lasting good, it cannot be called educational and has no place in the school or the classroom. Her Majesty's Inspectorate have called attention more than once to the importance of matching the content of the curriculum to the needs of pupils.

> If we are serious about equality of opportunity we must recognise the need for a curriculum appropriate for all our pupils whatever their cultural or social background." (Wheldall, Merrett & Houghton 1989, 39)

In ME, this approach is also linked—albeit cautiously—to the construct of distributed expertise of skills and knowledge (e.g., Lin et al. 1995, 56) which, in communities of learners, help to develop mutual respect between and among students as they start realising that in order to accomplish shared goals they need each other.

2.2.3 Cultural Democracy

The third approach called the cultural democracy approach visions an unoppressive, equal, and culturally diverse society by redesigning classrooms and schools. Appelbaum & Enomoto (1995, 51) contend that technology helps us create an "ideal public space" in the spirit of Habermas (1974), in which undominated dialogue could possibly construct a model of social interaction within an unoppressed and equal society. Appelbaum & Enomoto (1995, 51) mainly refer to computer-mediated communication (CMC) but their conclusion is likely to hold true in the case of other educational applications of ME as well: "... the contextualization of this individual empowerment within the artificial model of a pluralist society would foster a comprehension of individual participation in social change".

2.2.4 Single-Group Studies

The fourth approach, i.e. that of single-group studies, is likely to focus on individuals' own experiences as either citizens of the society they are living in or as virtual or digital nomads in a virtually conceptualised learning environment, such as a Virtual School (cf. e.g., Paulsen 1987, 72; Blystone 1989; Paulsen & Rekkedal 1990, 59; Tella 1994b; Tella 1995b; Tiffin & Rajasingham 1995) or, more generally, a Virtual Learning Space.

2.2.5 Multicultural and Social Reconstructionist Education

The fifth approach, that of a multicultural and social reconstructionist education, is probably the synthesis of the first four. This approach converges closely with issues of societal change and sociological aspects. If this approach is adapted to FLL methodology, the learning process is likely to advance in the direction of sociology. This approach is intimately associated with Skilbeck's educational ideologies (Skilbeck 1982), between classical humanism and progressivism. At the school level, the question is also of school pedagogy. Several issues become important, such as power relationships but also personal empowerment and awareness of upper-level complexities.

Lin et al. (1995, 54) argue that social considerations belong to the second wave of the cognitive revolution, focusing attention on the social contexts of learning that have pervasive cognitive and motivational effects, while the first wave mainly dealt with individual thinkers and learners, de-emphasising affect, context, culture, and history. This tendency is in harmony with the fifth approach, i.e., the multicultural and social reconstructionist emphasis on learning.

Even if the five-tier categorisation is of interest to FL teachers, it does not underscore sufficiently the importance of cultural aspects. It might be a truism to state that cultural knowledge is learnt and transferred and reconstructed with and through the medium of language. In this respect, foreign languages are perfect tools for MC. On the other hand, ME lays a lot of emphasis on the relevant uses of pedagogical tools, so here the interests are common and can be shared in the benefit of FL learners.

Hooper (1981) is probably quite right when he argues that when we speak of multicultural education, it is worth bearing in mind that

> "... one of the simplest and yet most difficult ideas to internalize is the concept of perceptual difference—the idea that

> everyone perceives the world differently and that members of one culture group share basic sets of perceptions which differ from the sets of perceptions shared by members of other culture groups. It is not that the idea is difficult to understand, it is that it is hard to impose upon ourselves, to internalize so that it affects our behavior." (Hooper 1981, 13)

◆

In conclusion, when we analyse and try to exemplify the interrelationships between multiculturalism, media education and foreign language learning methodology, we must remember that each of the three areas have their own intrinsic conceptualisations and traditions. Consequently, the different mental representations different people construct on them also vary considerably. However, we believe that some of the components do overlap and might result in fruitful synergy if taken properly into account.

3. MEDIA EDUCATION

In this article, media education (ME) is used as a generic term to refer to various kinds of technological tools and applications, and in particular to modern information and communication technologies (MICT, often abbreviated as ICT), open learning and distance teaching (ODL in the European Union terminology), flexi-mode teaching (combining face-to-face teaching with distance teaching). This use of media education is based on a telelogic (cf. Ball-Rokeach & Reardon 1988) definition of communication, diverging slightly from a mainstream definition of media education, more likely to underline the major role of mass media (the main developmental stages in telelogically defined ME, cf. Tella 1996d).

3.1 From Computer-Based Education to Network-Based Learning

In the following, a summary will be presented from a number of developmental stages between what we call the starting point (the initial main concept), i.e., computer-based education (CBE), and where we are now, i.e., network-based learning (NBL). The computer paradigm shifts have also been analysed elsewhere by Tella (1994a, 49–55; 1995a; 1996d, 228–233), but Figure 1 is the first graphical overall presentation of the changes.

In the 1960s and 1970s, the basic constructs could be labelled as CBE (computer-based education) on one hand, and ADP (automatic data processing) on the other. A modern concept of media education owes a lot to both, but especially to the fusion between some of their later developments. It is a common practice to divide CBE into computer-managed instruction (CMI) and computer-assisted instruction (CAI) or computer-assisted learning (CAL). In foreign language learning, CAL led to computer-assisted language learning (CALL) or to CELL (computer-enhanced language learning), as it is sometimes called. Electronic performance

support systems (EPSS) are cautiously taken for a new category of educational software (Collis & Verwijs 1995), though combining features of word-processing, spreadsheets, etc. (A more detailed description, cf. e.g., Barker & Banerji 1993; Collis & Verwijs 1995, 6; Tella 1995a.)

Another developmental trend was witnessed when ADP developed into information technology (IT). In education IT was found more useful than technology-based ADP, which, naturally, still has its role in administration, for instance, as far as schools are concerned. Roughly speaking, after the mid-1980s IT and communication technologies (CT) started to merge. Electronic mail and computer conferencing are functional examples of this fusion. While word-processing as such still represents IT, combining the use of email and a word-processor already illustrates information and communication technologies (ICT[1]). As this combination seemed unfamiliar to many, it was referred to as *new* information and communication technologies (NICT), though others, arguing that there is nothing really new in using telephony in communication, preferred *modern* information and communication technologies (MICT), which is also used in this article as the main concept. It is plausible that MICT will change into post-modern information and communication technologies (PMICT) at least for a while, especially now that emphases on post-modernism are so dominating.

The present state of the art can be called network-based learning (NBL), firmly rooted in the telematic applications of the Internet and World Wide Web but grounded on the two traditions. Over the decades, the emphasis has also shifted from education/teaching to learning and to learning environments. At present, a computer not logged on to a communications network is a stand-alone machine, still useful in many respects but overwhelmingly more powerful if full

[1] ICT was preceded for a short time by CIT (communication and information technologies), even used in some UNESCO documents, but it soon became evident that native speakers of English in particular had difficulty pronouncing this abbreviation without smiling, so it was gradually changed into ICT.

connectivity to the Internet is guaranteed. As new applications keep on being launched, many educators, no doubt, whole-heartedly agree with Collis & Verwijs's (1995, 5) statement that "we seem now to have moved from a time of comparative simplicity to one of a bewildering range of developments and terminology". Some of the tools available in NBL will be presented and analysed in Chapter 3.3.

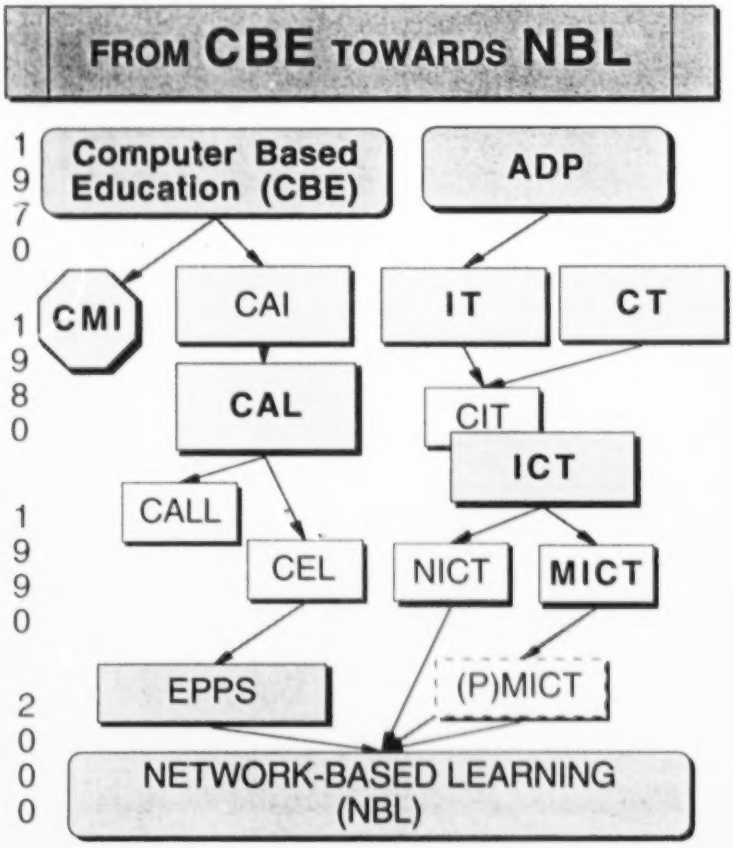

Figure 1. A Summary of Changes from Computer Based Education and ADP to Network-Based Learning.

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3.2 From Distance Education to Open and Distance Learning

There have also been changes in terminology and in emphasis regarding distance education (DE), which used to be the main concept in the 1980 and even in the early 1990s. Even if this article does not concentrate on these changes in great detail, it could be mentioned that distance teaching (DT) and distance learning (DL) are often substituted for DE in modern educational parlance, but it remains to be seen which of the terms now in use will outdo the others. At present, both distance education, distance teaching and distance learning are being used, together with other terms indicated in Figure 2, e.g., Thombs, Sails & Alcott 1989; Chacon 1992; Henri 1992; Rowntree 1992; Farr & Shaeffer 1993; LeBaron & Bragg 1993; Paquette, Bergeron & Bourdeau 1993; Wagner 1993; Husu et al. 1994; Comeaux 1995; Jonassen et al. 1995; McHenry & Bozik 1995; Bates 1996; Meisalo 1996; Moore & Kearsley 1996; Salminen 1996. Education at a distance is also used (e.g., Husu 1996). A thorough analysis of a classroom focused distance education framework is presented in Husu (1996). Kynäslahti (1996) aptly discusses the common trends between distance education and globalisation.

Open learning (OL), together with flexible learning (FL) and distance learning seem to have formed the concept of open and distance learning (ODL).

A more thorough analysis of the differences between the various components is outside the scope of this article, but we will refer tentatively to a few definitions. Maxwell (1995), for instance, makes the following distinction:

> "Open learning is defined as a student-centered approach to education that removes all barriers to access while providing a high degree of learner autonomy. Distance education refers to a mode of delivering a course of study in which the majority of communication between teachers and students occurs noncontiguously, and the two-way communication between teacher and student necessary for the educational process is technologically mediated. Distance education may

or may not be based on open-learning ideals." (Maxwell 1995, 43)

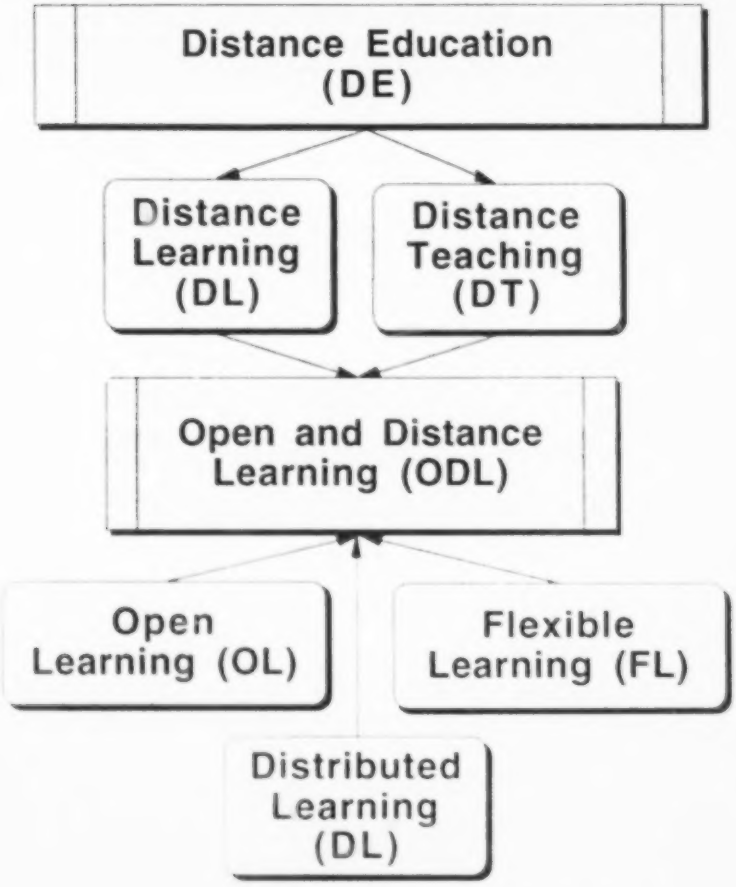

Figure 2. Some Changes from Distance Education to Open and Distance Learning.

On the whole, Maxwell (1995) regards open learning and distance education as two non-traditional learning ap-

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proaches that might provide an option for reaching non-traditional students. He further argues that

> "... [d]istance education and open learning should be recognized as two distinct concepts. Distance education refers to a mode of delivery with certain characteristics that distinguish it from the campus-based mode of learning. Open learning refers to a philosophy of education providing students with as much choice and control as possible over content and learning strategies. A distance-education institution could be open or closed. An open learning course could be offered on campus or at a distance." (Maxwell 1995, 46)

Atkinson (1996) argues that 'open learning' carries connotations of learning not being closed or blocked off, and so able to be more readily accessed with the opportunity to participate and succeed, while 'flexible learning' carries connotations of learning being more adaptable and versatile, so enhancing opportunities to participate and to be successful. In her opinion, openness can be seen as relating more to an outcome and flexibility to the means of achieving this outcome. The two terms appear to be two sides of the same coin. Flexibility contains dimensions of access (the opportunity to participate), timing and duration, location of study, curriculum factors, and learning support. (Atkinson 1996, 45–46)

Bates (1996) defines distributed learning (DL) as

> "... a learner-centred approach to education, which integrates a number of technologies to enable opportunities for activities and interaction in both asynchronous and real-time modes. The model is based on blending a choice of appropriate technologies with aspects of campus-based delivery, open learning systems and distance education. The approach gives instructors the flexibility to customize learning environments to meet the needs of diverse student populations, while providing both high quality and cost-effective learning." (Bates 1996, 9)

Bates goes on to contend that although many people use the terms 'distributed learning' and 'distance education' inter-

changeably or assume that they mean the same thing, this is not the case. He gives an example of university-level courses for fully registered, on-campus students where a substantial part is available on the Web or on CD-ROM. Students can access this material at any time, from the campus or from home, which certainly makes the course more easily accessible. However, Bates remarks these students have to be 'resident', i.e., available for lectures. In this case, this is distributed learning but not distance learning nor open learning since students have to meet all the stringent entrance requirements to be registered as university students. (Bates 1996, 9–10).

Wylie (1996) summarises eight characteristics of open learning:

> 1) Who? (flexible entry provision),
> 2) Why? (responsive to learner needs),
> 3) What? (learner can negotiate content),
> 4) How? (resource-based, alternative strategies),
> 5) Where? (home, workplace, study centre),
> 6) When? (flexible start, pace, completion times),
> 7) How effective? (learner participates in assessment),
> 8) Who helps? (variety of advice, support available). (Wylie, 1996, 288)

The tools and software used in DE are often quite the same as in ODL, but there is a shift in emphasis from a more teacher-focused environment towards an open learner-centred and virtual learning environment with a focus on distributed expertise and cognitive tools. Some of these foci will be exemplified in Chapter 3.3.

3.3 Technological Levels of Media Education

Table 1 summarises some of the developments in the growing use of various technologies in teaching. It also describes the temporal progress taken place in the integration of different tools and software in traditional teaching.

Table 1. A Draft Categorisation of Technological Levels of Media Education (based originally on LeBaron & Bragg 1993, 87 but considerably updated).

TRADITIONAL SITE-BASED INSTRUCTION			BASIC –5
SITE-BASED INSTRUCTION USING EDUCATIONAL TECHNOLOGY			BASIC –4
CONVENTIONAL TELEVISION	CONVENTIONAL AUDIO		BASIC –3
EDUCATIONAL VIDEO			BASIC –2
FACSIMILE			BASIC –1
COMPUTER CONFER-ENCING	**MAIL LISTS, LIST SERVERS, NEWSGROUPS**	**E-MAIL (MIME, 8-BIT COMPATIBLE)**	**BASIC**
AUDIO-CONFER-ENCING	AUDIO-GRAPHICS	GOPHERS, IRC, DATABASES COMPUTER FILE EXCHANGE	BASIC +1
MICRO-WORLDS (MUDS, MUSES)	MULTIMEDIA, HYPERMEDIA, CD ROM, CD-I	INTERNET, WORLD WIDE WEB (HTML->VRML)	BASIC +2
SOME APPLICATIONS OF LANGUAGE ENGINEERING			

VIDEO-CONFER-ENCING	COMPACT VIDEO-CONFER-ENCING	DESKTOP VIDEO-CONFER-ENCING, REALAUDIO, NETPHONE	BASIC +3
PERSONAL COMMUNICATORS (INTEGRATED E-MAIL, FAX, INTERNET, SMALL MESSAGE SERVICES, ELECTRONIC CALENDAR, NOTEBOOK, CALCULATORS, CLOCKS)			BASIC +4
NETWORK-BASED LEARNING GROUPWARE (SHARED WHITEBOARDS, SHARED APPLICATION PROGRAMS)			
SATELLITES, GLOBAL -> UBIQUITOUS COMPUTING, VIRTUAL REALITY, PAN TECHNOLOGY			BASIC +5

Table 1 has been considerably updated and enlarged from the original (LeBaron & Bragg 1993, 87; cf. also Tella 1994c, 155), which clearly shows the rapid and steady progress of technology. Not only have a lot of applications been added to the table but also the basic level has been redefined and upgraded. In the original, the basic level was defined by the use of conventional television and conventional audio (Basic –3 in the present updated version). It seems evident, however, that that level is no longer valid as a basic level for most FLL environments. The basic level has now been defined to include the very central telematic tool, i.e., e-mail (preferably Mime[2], 8-bit compatible electronic mail) with

[2] MIME (Multipurpose Internet Mail Extensions) offers a simple standardised way to represent and encode a wide variety of media types, including textual data in non-ASCII character sets, for transmission via Internet mail. MIME extends RFC 822 in a manner that is simple, completely backward-compatible, yet flexible and open to extension. In addition to enhanced functionality for Internet mail, the new mechanism offers the promise of interconnecting X.400 "islands" without the loss of functionality currently found in X.400-to-Internet gateways.

some of its basic services, like mail lists, list servers and newsgroups as well as computer conferencing. Using e-mail that is mime-compatible gives the FL teacher the possibility to use accents and other diacritics while sending e-mail. In addition, using attachments gives her the chance to exchange fully formatted and edited documents or files with other people. Using fax machines and educational video (in the original classification: instructional video) should also be taken for granted in modern FLL methodology.

AUDIO-CONFERENCING	AUDIO-GRAPHICS	GOPHERS, IRC, DATABASES COMPUTER FILE EXCHANGE	BASIC +1

Basic Level +1 consists of the uses of gophers (becoming or in places already become obsolete as the World Wide Web advances), real-time text-based communication services (e.g., IRC or Internet Relay Chat, Phone) and exchanging computer files and documents (e.g., FTP, Fetch, etc.) together with databases and knowledge bases. Audio-conferencing and audiographics can also be located at this level. The role of audiographics is also on the decrease as new whiteboard applications become more common on the Internet.

MICROWORLDS (MUDs, MUSEs)	MULTIMEDIA, HYPERMEDIA, CD ROM, CD-I	INTERNET, WORLD WIDE WEB (HTML->VRML)	BASIC +2
SOME APPLICATIONS OF LANGUAGE ENGINEERING			

Basic Level +2 focuses on various uses of multimedia and hypermedia based applications. The World Wide Web is undoubtedly the best-known and most widely exploited application at the moment, though it is just a part of the Internet. Other applications in this category contain microworlds, e.g., MUDs (Multi-User Dungeons) and MUSEs (Multi-User Simulation Environments). MUDs are "magical, text-based worlds where users can assume fluid, anonymous identities and vicariously experience intriguing situations cast in a dramatic format" (Dede 1995, 48). MUDs are

gradually transforming into MUSEs, whose main objective is to share learning within the computer-based world. Another large category is multimedia and hypermedia based applications, including CD ROMs and even newer applications such as CD-I.

From didactic points of view, Basic Level +2 is characterised by tools that fully enable computer-supported collaborative work (CSCW[3]). Even some tools at Basic Level +1 (even at Basic Level, for instance computer conferencing) give some support but basically the tools before this level are best used for individual autonomous work. Collaborative work can be underlined with a view to computer-supported intentional learning environments (like CSILE, cf. e.g., Lin et al. 1995, 57; Suoniemi-Särkijärvi 1996), which make use of the capabilities of a networking learning environment. At the same time these environments underline the importance of distributed expertise, capitalising on the community's diversity of skills and knowledge (cf. e.g., Lin et al. 1995, 54).

Designing pages on WWW was first due using HTML (Hyper-Text Markup Language), which is now more or less being replaced by integrated editor/browser packages, leaving the command of this language to a more specialised use. VRML (Virtual Reality Markup Language), on the other hand, allows the drawing of three-dimensional (3D) environments for the Web and is expected to become the standard very soon, most probably to be replaced by something else in a year or two.

Language engineering is another area that in this draft classification is located at Basic +2. Language engineering in-

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3 The reader can easily become familiar with some of these tools by "surfing" on the Web. The following links were operational at the time this article was written, giving a few examples of CSCW tools and software:
http://homebrew1.cs.ubc.ca/webct/introduction.html
http://www.microsoft.com/exchange/e1.htm
http://www.lotus.com/notesr4/wmodel.htm
http://www.lotus.com/notesr4/response.htm
http://www.teamw.com/cgi-bin/pltn?A:/twhtml/pguide/tw5office.htm

cludes, among other things, the following application areas: an automatic analysis, observation and correction of a text; mastering multilingual documents; machine translation; electronic dictionaries; language learning software; localisation of computer software; information retrieval systems. Some of these applications are already an integrated part of word-processors and other software. Electronic dictionaries, for instance, allow users to check the spelling and hyphenation of a multilingual document. Another application, now available in the latest versions of word-processors, makes an automatic summary of a document, by using an artificial intelligence plug-in while summarising the contents of the document. FL teachers are also becoming familiar with the thesauruses and the grammar and style checkers available in quite a few software packages. In addition, various kinds of "wizards" have been incorporated in the latest software in order to help users cope with different kinds of problems.

VIDEO-CONFERENCING	COMPACT VIDEO-CONFERENCING	DESKTOP VIDEO-CONFERENCING, REALAUDIO, NETPHONE

BASIC +3

Basic Level +3 is concerned with various classes of video-conferencing (full size; compact; desktop) but also with Internet-mediated services like RealAudio and NetPhone. Applications belonging to this level enhance the user's chances to use visual and auditive elements in communication. Applications like NetPhone or Internet Phone combine telephony and computer-mediated communication (CMC), making it possible for the user to use his computer as a telephone. Applications like RealAudio or NetRadio, on the other hand, make it possible to use one's computer as a radio receiver. FL learners can utilise this possibility to listen to short-wave radio stations, for instance.

PERSONAL COMMUNICATORS (INTEGRATED E-MAIL, FAX, INTERNET, SMALL MESSAGE SERVICES, ELECTRONIC CALENDAR, NOTEBOOK, CALCULATORS, CLOCKS)
NETWORK-BASED LEARNING GROUPWARE (SHARED WHITEBOARDS, SHARED APPLICATION PROGRAMS)

BASIC +4

Basic Level +4 is dedicated to two main components, first to personal communicators and, second, to network-based learning (NBL) groupware.

The up-to-date integrated software and hardware applications called Personal Communicators or Smart Telephones, eloquent examples of Tapscott's "smart products" (1996, 44–46), merge most of the current telematic applications in a pocket-size gadget. This stage is closely linked to the status of a "digital nomad" (cf. Attali 1990), which creates a mobile office or a mobile learning and communication environment. Tapscott (1996, 65) epitomises this development by saying that the office is no longer a place; rather, it is a global system. He goes on to say that home may be where the heart is, but increasingly the office is anywhere the head can be connected.

The other half of this level is dedicated to network-based learning groupware, including shared whiteboards and other shared application programs. Strangely enough, modern applications enable both individual-centred communication but on the other hand also create more and more applications which individuals can share and which help them work together on the Internet, for instance. Shared whiteboards make it possible for several people to draw simultaneously on the same shared electronic whiteboard over a distance–or in the same conference room. Shared whiteboards are technologically more advanced than audiographics used to be, and can be accessed fairly freely through the Internet, though more powerful commercial products also abound.

SATELLITES, GLOBAL -> UBIQUITOUS COMPUTING, VIRTUAL REALITY, PAN TECHNOLOGY — BASIC +5

Basic Level +5 in this draft classification is a level not yet quite tangible for most FL teachers or teacher educators. True, satellite-mediated communication is quite common in certain areas, especially where cable TV networks give schools access to the use of satellite transmissions. Global (or ubiquitous) computing and virtual reality relate to the state of affairs where computer technology is hidden in most of the apparatuses one uses in one's professional life. Technology has become mostly invisible; nobody pays any attention to it any more but everyone is capable of utilising educational applications in a didactically appropriate fashion.

PAN (Personal Area Network) technology is expected to replace LAN (Local Area Network) in the near future so that technological applications make use of a human being's own electricity. One of the applications concerns the exchange of documents, say, business cards, by simply shaking hands with the person who is to get the documents. In PAN, a human being acts as a human modem, making it possible to exchange information between different people by touching each other.

◆

In conclusion, a few explanatory comments are needed. The classification in Table 1 is mainly about media education in general but with respect to open and distance learning in particular. It does not cover all applications available and accessible to an enlightened FL teacher. For instance, technology as tool, like word-processing, is not specified in detail, although a few examples of language engineering were given. Some more applications will, however, be referred to in Table 4.

Another thing to be pointed out is that from a FL teacher's point of view, educational applications are more important than technological tools or software as such. In the final analysis, the question is no longer how to simulate an infor-

mation-rich knowledge-intensive learning environment but how to cope with and make use of those enormous amounts of information available on the international communications networks, such as the Internet. This aspect will be looked at in greater detail in Chapter 5 where a more integrated analysis will be made.

One more important viewpoint to pay attention to is the fact that many of the new technological tools and applications are likely to break down the old established practice of teaching the same thing to everybody at the same time. Many of the tools discussed in this article favour distributed learning or rather individualised studying and learning, free of the restrictions of time and place while focusing attention on social aspects of communities of learners. Also, the latest developments in technology clearly facilitate network-based learning and communication.

A final remark concerns the categorisation of the tools and programs. It is, of course, to be understood that this classification is *one* way to analyse and to categorise the existing tools. People may find that they have achieved different levels and utilised certain tools from a certain level but not all tools belonging to a lower level. This aspect cannot be avoided in a model classification as it is based on a pragmatically informed selection of tools rather than on objectively quantifiable criteria. Yet, when discussing the classification with a number of teachers, they have usually found it valuable when attempting to assess how they "do" when compared to others. In this sense, the classification is likely to encourage more discussion and reflection on the various tools accessible. To some extent, the classification also exemplifies the chronological advancement of technological tools and software. If these "weaknesses" of the classification are properly understood, it may well serve as an example of how to look into the options available.

4. MEGATRENDS IN THE TEACHING/LEARNING PROCESS

In the following, a few general megatrends will be emphasised that have taken place in the teaching/learning process.

4.1 How FLL Methodology and Media Education "Found" Each Other

When analysing how FLL methodology and media education have developed, it is possible to see a certain host of common features that have helped the two to gradually converge towards one another. Some of these trends are depicted briefly in Table 2.

Table 2. Some Common Features Between FLL Methodology and Media Education.

FLL Methodology	Media Education
From a closed system of language towards an open system of knowledge	From ADP ("machine-driven") towards pedagogical applications ("user-driven")
From structuralism towards functionalism, experientialism and interactionalism	From ADP-based programming to CAL and to computers as tools (tools software, e.g., word-processing)
From mistakes and errors (taken for negative things) to thinking positively of errors as adding to one's learning process	Towards an open, multimedia-based, networking learning environment, with an emphasis on distributed expertise
To communicative competence	To computer literacy, tri-literacy and to media literacy

To pragmatic, communicative, cross-cultural proficiency • From form to content • Structures submitted to contexts relevant to communication situations • Meaningful to learners for different communication purposes • Intellectual challenges • Fictional uses of language	From monologic communication to dialogic and telelogic communication by means of computer-mediated human communication (CMHC) From closed (drill and practice - type) exercises to using real-life communications networks (e.g., the Internet)

To authentic, genuine and immediate/on-line/real-time communication, enriched with mediated communication

To autonomous work on one hand,
to cooperative work on the other,
initiative-taking, responsibility assuming

The European Dimension,
internationalisation, globalisation

Communicativess, dialogicism, mediation,
educational multimedia

Oddly enough, FLL methodology and ME have advanced along different paths but at some point their foci have emerged so that it is possible to conclude that they have quite a few goals in common. Some of these joint features are concerned with the nature of communication (authentic, genuine, real-time), others with the learner's task (autonomy, collaboration, initiative, responsibility). Along with trends of globalisation, some other constructs have become important, e.g., focusing on the communicative character of the teaching/learning process. The last constructs (communicativeness, dialogicism, mediation, educational multimedia) deal with the mediation influence of the media themselves (cf. e.g., Tella 1994a, 133–134).

4.2 From Teaching and Instruction to Learning

One of the shifts in emphasis has taken place in the interrelationship of teaching and learning. In the literature in the 1960s up to the mid-to-late 1970s, teaching was predominant. However, learning was gradually gaining ground and now it seems to be taken for granted that learning is put in the middle of the process. Consequently, we also talk about learner-based (learner-centred, learner-sponsored, learner-focused) approaches and strategies. This tendency has been aptly summarised by Branson & Buckner (1995) in the following way:

> "Modern research in cognitive and developmental psychology, along with that in instructional systems and other sources, provides visions of an active, supportive, and open environment where children work purposefully on individual plans based on their current skill capabilities, knowledge, and interests. That environment will focus directly on modern learning and developmental concepts rather than on traditional teaching, and will use principles derived from quality science to insure that all processes are effective." (Branson & Buckner 1995, 19)

In the area of technology too, the focus has shifted from instruction to learning. In the 1980s it was customary to talk about CAI (computer-assisted instruction) while CAL (computer-assisted learning) grew more and more topical. (It is true that in US technological parlance, CAI is still being used, but CAL—or CALL, i.e., computer-assisted language learning—has been the central term in Europe for years now, though in some circles it is being replaced by CELL (computer-enhanced language learning) (cf. Figure 1).

CELL could be paraphrased to include communicative CALL, including features such as nonlinearity and nonsequentiality (also characterising hypermedia, cf. e.g., Liu 1994, 305), program helps are contextualised, the learner is in the central position (instead of the computer being the omniscient judge as it used to in the early 1980s).

4.3 From the "Sage 'on the Stage' to the Guide 'on the Side'"

As far as FL teachers are concerned, one of the major changes has taken place in their professional role and status thanks to ME and MC. It is a current belief that teachers' role should change from an information-transmitter towards the role of a consultant, co-learner or a facilitator. Or as Marguerite A. Fitch put it at the annual AERA conference in New Orleans in April 1994, the teacher's role changes "from the 'Sage on the Stage' to the 'Guide on the Side'". However, fundamentally the question is of teachers' power and how and to what extent it is being delegated to the learners.

The uses of power manifest themselves in a number of forms in a traditional classroom. One way to categorise these uses is based on Underhill's (1989) division of power into four uses:

> (i) *Authoritative power*, exercised for and on behalf of the learner by others (usually by the teacher). This kind of power is conceptually contradictory, as the teacher often uses the power in order to help the learner to become more autonomous.
>
> (ii) *Autonomous power*, exercised by the learner himself, whose autonomy the teacher tries to facilitate and support by yielding some of her own power to the learner.
>
> (iii) *Authoritarian power*, a degenerate version of authoritative power, exercised by the teacher, consciously or unconsciously, over the learner without paying enough attention to his interests. The learner is taken as an object, rather than as an autonomous and reflective subject.
>
> (iv) *Abdicated power*, a degenerate version of autonomous power, exercised by the learner to whom it has been given inappropriately by the teacher who is unable or unwilling to exercise it herself. The teacher attempts to yield some of her authority to the learner, who is not able or capable of assuming the responsibility of his own deeds. (Underhill 1989, 254)

Van Manen (1990, 153), however, has aptly remarked that the opposite of oppressive authority is not necessarily democracy but rather pedagogy, i.e., a working relationship between teacher and student can be built on relations facilitating learning from and with someone who can deepen the student's action-sensitive understanding.

In Underhill's (1989) interpretation, the first two (authoritative and autonomous) are the sorts of power whose sound balance constitutes a competent and legitimate dimension of power. In general, teachers' behaviour is expected to support students' self-directed, autonomous learning. But perhaps not all teachers are willing to move in that direction. Dalton (1989, 22–23), for instance, argues that "most teachers simply enjoy being on center stage, being a celebrity within their classrooms and schools". Hellgren (1985, 77) emphasises that the joint action of teaching ('we-intention') ultimately depends on students being willing to freely join the teaching action. In order to do so, they can be expected to require a certain amount of power to exercise.

In open multimedia-based networked learning environments, such as created by computer-mediated human communication (CMHC), teachers may feel that their traditional position is at risk, which might lead to their sticking more firmly to the setting they can easily master. Seeking help from the power they are used to exercising is also a defence mechanism among teachers and also belongs to their interactional strategies which they adopt in different social contexts. According to Troyna & Foster (1988, 294–295), teachers tend to adopt a 'professional' perspective in official meetings; a 'personal' perspective in the common room, and a 'survival' perspective in the classroom. These different strategies lend themselves differently to the various uses of power as well.

5. FROM INITIAL AWARENESS TOWARDS METACOGNITIVE LEVELS OF UTILISATION

5.1 A Comparative View of Multiculturalism, Foreign Language Learning and Media Education

Table 3 is the first attempt to categorise some trends and tendencies within the three topic areas discussed in this article, multiculturalism (MC), foreign language learning (FLL) and media education (ME). The attempt is of a provisional character as the phenomena described are too extensive to fit into narrow slots. The main purpose of Table 3, however, is to serve as a summary of a number of developments and to urge more reflection on these items, some of which will be discussed in Chapter 5.2.

Table 3. Trends in MC, FLL and ME: A Comparative View.

MC	FLL	ME
• multicultural awareness	• growing awareness of language as a communicative tool for oneself (vs. traditional structural view)	• computer awareness, media awareness
• cross-cultural education • international education • globalisation	• eclectic but critical methodological approach, profiting from both MC and ME	• computer-mediated human communication
	• in-depth understanding of other people and cultures, in addition to one's own	• modern information and communication technologies

	• on-line, real-time, authentic, genuine communication made possible through ME • collaboration and co-operation, especially around distributed expertise • cross-cultural, technology-facilitated communication skills • authentic, rich, meaningful communication contexts • access to large amounts of information	• computer-supported collaborative groupware • media literacy
• multiculturalism as a metadiscipline	• open multimedia-based networked FLL environments	• media education as a metadiscipline

In this initial analysis, the first stage consists of the level of awareness, as FL teachers gradually become cognisant of the two growing phenomena, i.e., MC and ME. In MC the first signs of awareness pointed to the fact that not only the target language culture but also one's own culture had to be taken into consideration. Little by little, it became evident that several cultures usually step in when foreign languages are being studied, which led to cross-cultural or multicultural emphases, later opening up to international education and globalisation in general.

In the field of ME, the first step could be called that of computer (or, more generally speaking, media) awareness, which resulted in a better understanding of media literacy. At present, both multiculturalism and media education can be called metadisciplines as they aim at enhancing the metacognitive levels of the target audience (whether FL teachers, teacher educators, learners or users of computer technol-

ogy) about what they are doing and why. Increasing the metacognitive level of knowledge, skills and proficiency is no doubt one of the most important tasks both MC and ME share and from which FLL is likely to benefit in the long run.

5.2 Examples of Trends in FLL Methodology

In this chapter, some examples will be given with a view to general trends in FLL methodology (cf. also Tella 1996c).

5.2.1 Learning Atmosphere

A general trend supported by both ME and MC concerns developing communication skills and understanding of other people. This is a main objective in MC, and ME gives relevant tools and contexts for that. For instance, keeping in touch with target-language e-mail friends ("e-pals") is a practical way of brushing up one's language proficiency while getting more deeply involved in and familiar with the cultural aspects of one's counterparts.

5.2.2 Quality of Input

In FLL, it is generally agreed that the quality of input should be many-sided, rich, repeating, meaningful, and authentic. This kind of learning environment is not easily attained in a traditional FL classroom, although the use of videotapes and TV naturally makes the situation a lot better. Some of the ME applications serve this purpose extremely well. For instance, by integrating the use of e-mail and the Internet into FLL, a lot can be achieved. The Internet gives access to authentic target audiences as well as to genuine and information-rich learning environments. Creating e-mail and (desktop) videoconference links with people from all over the industrialised world is quite an asset to FLL..

Cognitive psychology has, among other things, underlined the importance of context and conversation in the learning

process, often leading to "situated learning" and "discourse communities". At the same time, it has been pointed out (e.g., by Kauppi 1993) that the learning environment at school is often too impoverished for real learning to take place. This easily results in little if any transfer from a school-learnt skill to using it in a real-life situation. It has also been argued that learning tasks in school contexts should be more demanding and structurally more complex. These kinds of challenges are embedded in regular uses of international communications networks, for instance. If an FL learner takes part in, say, newsgroups, he is likely to have to cope with a complex and challenging learning situation.

An extensive use of international communication networks, including e-mail, newsgroups, computer conferencing and, naturally, the World Wide Web, is also bound to profit from the so-called topicalisation hypothesis (e.g., Ellis 1990, 95, 123), which means that when the learner can have his say about the content, he is more likely to have a higher motivational level, leading to better learning. It has also been noticed earlier (e.g., Tella 1991; 1992b) that the usual content areas listed in the official curricula can be made much more versatile and up to date when telematics is integrated into the teaching/learning process.

Another asset in using ME is that it gives the learner access to a wide representation of different regional variants. Instead of using printed encyclopaedia, dictionaries or thesauruses, the learner can utilise them in electronic form. On the Internet, he accesses nowadays hundreds of different dictionaries in innumerable languages. Of course, spellers and grammar checkers give their electronic hand to the essay writers, which is likely to change the writing process in schools in the years to come (cf. language engineering in Table 1.) The process-based writing method has already been adopted in many schools and learning settings.

In short, ME gives the learner full connectivity to language used in real life, as contrasted to the language as studied at school only. In this respect, ME is co-operating with tradi-

tional videos and educational TV and satellite channels, which in turn give teachers and students alike a way to authentic language, not forgetting non-verbal language.

5.2.3 Quality of Communication

One of the trends in modern FLL methodology is the focus on the quality of communication, e.g., the shift from mechanical exercises (drills) towards own-initiated expression. Another viewpoint is concerned with the shift from form to meaning, one of the fundamental principles of communicative FLL methodology.

If we accept the argument of a number of researchers (e.g., Widdowson 1990, 23) that "monitoring, properly understood, is a crucial feature of communicative interaction", it could be argued that ME contributes to creating and establishing an open learning environment in which the learner is encouraged to monitor his own performance to the extent he finds appropriate. This viewpoint is clearly connected to recognising the learner's metacognitive and metalinguistic skills.

One of the most argued issues in FLL methodology has been the question of comprehensible input, which Krashen, for instance, called the fundamental pedagogical principle. Some others contend that in interaction between a native speaker and a non-native speaker, both employ strategies for negotiating a joint meaning. Therefore it can be argued that also the learner exercises his own initiative to ensure the proper supply of comprehensible input (Widdowson 1990, 23–24; see also Ellis 1990, 108). While making use of ME and when being involved in cross-cultural dialogues or discussions, the learner is asked to act in a proactive way in order to cope with the input coming through the network. The need for negotiating meaning is a *sine qua non*, but as it comes from the learner's counterpart, not from the teacher, it is more natural to accept it spontaneously and to react to it in a more pertinent way.

One of the major pros in taking advantage of ME in general and computer-mediated human communication in particular, is the fact that it easily leads to the learner's own elaboration of the language material. This also includes turn-taking and skills connected to the conversation discourse, while underlining the learner's strategic competence and compensation strategies (e.g., Ellis 1990, 178–179).

In FLL methodology, the question of whether to pay attention to the target language code, i.e., grammar, has been topical for decades. The strong assumption states that attention to the code is necessary for L2 learning in a classroom context, while the weaker assumption states that attention to the code is not necessary but is desirable as an aid to learning (cf. Ellis 1990, 14). In international communications networks, for instance, this question—as so many others usually talked of in ordinary classroom contexts only—seems different. As communication on the Internet is real-life communication—it is not a simulation or emulation of it; rather, it is communication *par excellence*—attention to the code is necessary to some extent but inferior in importance to meaning. It has been argued elsewhere (e.g., Tella 1991) that the authenticity of language and authentic responses called for by the usage of that language should automatically lead to teachers reacting differently to texts coming through the Web, for instance, as these texts cannot and should not be submitted to serve the teaching of the linguistic code only; rather, they presuppose authentic and genuine reactions from the recipients which might be quite different from what FL teachers are used to expecting from the learners. For instance, an authentic reply to a request coming from foreign e-mail pals is not a word-for-word analysis of the text itself but preferably an informative answer to the sender, providing him with the necessary information that would be given in any genuine real-life situation.

5.2.4 Concept of the Structure of Language

As a pedagogical approach, a shift has taken place from 'medium' to 'mediation'. The medium concept implied that

the message was conveyed through the language—the meaning of the communication was linguistically encoded. In the mediation concept (cf. e.g., Widdowson 1990, 118–120), the question is not what linguistic expressions communicate but how people communicate by using linguistic expressions, so the question is about the pragmatics of language use, pragmatic features and problem-solving situations.

One of the basic principles in the mediation concept is that the language is controlled by intake, not by input. This aspect reflects the faith in the learner's capacity to "take in" and to digest linguistic material to a varying extent. While using international communications networks and the Internet in its various forms, the FL learner can control the intake as it is not being regulated by the textbook or by the national curriculum or, worse still, by the teacher who might believe that it is primordial to control the input learners can cope with. In this light, the learner is seen as an autonomous and self-regulating agent, while the teacher's role is more that of a resource person.

5.2.5 Mistakes and Errors

In FLL methodology, a radical change has also taken place with respect to how teachers and learners react to mistakes and errors. In earlier years and especially during the audiolingual approach, mistakes were to be avoided and corrected any time they occurred. In communicative FLL, on the other hand, mistakes and errors are regarded as a prerequisite to learning, an integral, essential and necessary part of the learning process, on the whole showing that learning is taking place.

When integrating ME into FLL, learners are likely to encounter a lot of "incorrect" uses of the target language. However, it would seem important for the teachers to recognise this fact and act accordingly. While facing different "brands" or "genres" of target language on the Web, for instance, learners should be aware of this state of affairs. From

the point of view of meaningful communication, mistakes may slow down the message or corrupt it but on the other hand, the language used on the Internet shows much more interesting features in compensation. For instance, when browsing through newsgroups, one is coming across new expressions, lively contemporary uses of the target language, which, when added to all new topics accessible, contribute fruitfully to the genesis of a new kind of language learning environment.

Technically, the question is partly of the differences between informal–unplanned and formal–planned discourse (e.g., Ellis 1990, 120). The language that FL learners encounter in CMHC often represents the former, i.e., an informal or unplanned discourse. The teacher naturally recognises certain features that characterise this kind of discourse, e.g., topicalised constructions, loose co-ordination, repetitions and fragmentary expressions, etc.

5.2.6 Quality of Learning

Some of the most important foci in FLL methodology that can well be supported by ME include the following: supporting and encouraging risk-taking among learners, encouraging learner involvement, urging learners to deeply process what they study, and to aim for own-initiated expression.

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To sum up, it seems quite obvious that FLL methodology can profit considerably from the contributions that multiculturalism and media education can add to it. Many of the contemporary trends in FLL methodology are in parallel with what can be achieved through a many-sided use of different tools and programs of media education, for instance. It also seems that modern information and communication technologies are not only tools but also create empowering learning environments which are likely to bring to fruition the modern constructivist concept of learning, dis-

cussed in more detail in Chapter 6. This way, an effective combination of multiculturalism, foreign language learning methodology and media education help both teachers and learners upgrade their initial awareness level towards more metacognitive levels of language proficiency, making them more cognisant of the advantages of the synergy created and facilitated by a powerful and communicative interaction between the three areas.

6. IN RETROSPECT

6.1 Meaningful Learning and Various Technologies

6.1.1 Qualities of and Activities Leading to Meaningful Learning

Learning psychologists (e.g., de Corte 1995; Jonassen 1995) agree on a certain number of descriptors that help to characterise qualities of meaningful learning. Jonassen (1995, 60–61), for instance, enumerates seven qualities, viz. active, constructive, collaborative, intentional, conversational, contextualised, and reflective. These qualities can be combined with three different computer uses or categories of technology, viz. technology as tools; technology as intellectual partner or Mindtool, and technology as context (Jonassen 1995, 62). These two classifications are combined in Table 4, which also gives examples of activities that are expected to lead to meaningful learning.

Table 4. Technologies to Support Activities Engaging Students in Meaningful Learning (Jonassen 1995, 63).

Learning	Activity	Computer Use
Active	• mindful thinking • knowledge representation • communicating with others	• productivity tools • cognitive tools • learning environments
Constructive	• accessing information • constructing personal representations	• cognitive tools • student-produced media
Collaborative	• social negotiation • form communities of learners • communication with others	• computer conferencing • computer-supported collaborative work

Intentional	• articulation of goals • wilful achievement • mindful effort	• computer-supported intentional learning environments • activity organisers
Conversational	• communicating with others • social negotiation • knowledge building communities • communities of learners/practitioners	• computer conferencing • NetNews • computer-supported collaborative work
Contextualised	• solving real-world tasks • solving meaningful, complex problems • constructing situation-specific schemas • defining/interacting with problem space	• case-based learning environments • video scenarios • microworlds
Reflective	• articulating what is known • internal negotiation • reflecting on what is known and how	• cognitive tools

The following specifications are based on Jonassen's classification of *'echnology as tool, technology as intellectual partner, and technology as context* (1995, 62) but complemented with reflections of other researchers[4]. The purpose is to make it easier to grasp what sort of inner meaning ME can give to FLL methodology.

[4] Jonassen (1995) does not seem to make a clear distinction between 'technology' and 'media' in the same as Moore & Kearsley (1996, 10), for instance. When speaking about 'technology', they include the postal system, radio and TV companies, telephone, satellite, cable, and computer networks, while what is distributed through the technologies are mediated messages (symbol systems) usually referred to as 'media'.

6.1.2 Technology as Tool

Technology as tool is divided into three areas: accessing information, representing ideas and communicating with others, and generating products. Many researchers (e.g., Kemble & Brierley 1991; Tesler 1991) found out that software tools (word processors, spreadsheets, and database management applications, for instance), i.e., using computers as desktop productivity tools for writing, drawing, etc., represented a handy means of getting acquainted with computers and finding out that working with computers was meaningful and productive in one's own work.

Typical examples of tools are word-processors, electronic spreadsheets, desktop publishing, fax machines and, in general, applications belonging to Basic Level –1 in Table 1. As to word-processors, for instance, in FLL their capacity is upgraded with spellers, grammar checkers, etc. Another tool usually built in all modern word-processors is an outliner, which helps the user structure an essay, an article or any piece of writing more powerfully than by simply using the basic qualities of a word-processor. In Jonassen's words (1995, 62), "technologies as tools extend human functionality".

6.1.3 Technology as Intellectual Partner

Technology as intellectual partner consists of five subareas: articulating what learners know, i.e., representing their knowledge; reflecting on what they have learned and how they came to know it; supporting the internal negotiation of meaning making; constructing personal representations of meaning, and supporting mindful thinking. In Jonassen's interpretation (1995, 62), technologies as intellectual partners not only extend but also *amplify* the capabilities of humans. This category includes tools like databases, semantic networks, expert systems, computer conferencing and multimedia/hypermedia construction.

Research is little by little focusing on these technologies but not only from the perspective of technicalities; rather, more emphasis is being laid on the personality characteristics of users who find it valuable to use these technologies. Computer conferencing is one of the best researched areas even if not even it is well known yet. A general conclusion drawn from the users of e-mail pointed to the fact that there are groups of users who value virtual environments much more than others. Dede (1995) has analysed computer conferencing from this perspective and summarises his findings as follows:

> "One such population [of users of computer conferencing] is people who don't do well in spontaneous spoken interaction (e.g., shy, reflective, more comfortable with emotional distance), but who have valuable contributions to share with others. For this type of person, informal written communication is often more authentic than face-to-face verbal exchange. This may be a whole new dimension of learning styles orthogonal to the visual/auditory/kinesthetic/symbolic categories now underlying pedagogical approaches to individualization." (Dede 1995, 47)

In addition, as contended, among others, by Tella (1991), the focus has been moving towards a holistic learning environment. For instance, the use of international communications networks and e-mail has unlocked doors to an open, multimedia-based learning environment. E-mail has a lot to do with human relations too, as mentioned in connection with MC. On the whole, Basic +1 (and upper) Level tools and applications exemplify this category well (see Table 1).

When we speak of a multimedia-based learning environment, it can be associated with an anchored instruction model (cf. e.g., Lin et al. 1995, 59). This is an approach that aims at developing a wide variety of anchors that can serve as common grounds for further studying and learning. Anchors in this sense can be videos, computer games, simulations, hands-on activities on the computers, computer-mediated communication activities, etc. Technological tools are intended to contribute to the learners' construction of know-

ledge, instead of just letting them restate what has earlier been said or told by the teacher or by the textbook.

Some of the tools mentioned earlier (cf. Table 1) are mostly text-based, especially e-mail, mail lists, newsgroups, computer conferencing (Basic Level), gophers, IRC, databases (Basic +1) and (so far most of the) microworlds (Basic +2). IRC is used by Dede (1995, 47) as an example of how people's behaviour may shift in virtual worlds by the ongoing overlay of textual commentary that establishes social context in current synthetic environments. Dede (1995, 47–48) points out that historically the social context cues guiding communication have usually been more physical than verbal (e.g., modes of dress, tone of voice, posture), so that now in virtual worlds (worlds stripped of non-verbal contexts), users have unconsciously felt the need to create a new type of rhetoric for the exchanges on the Internet, as it is felt to be vital in distributed constructivist environments.

6.1.4 Technology as Context

Technology as context contains four subcategories, i.e., representing and simulating meaningful real-world problems, situations, and contexts; representing beliefs, perspectives, arguments, and stories of others; defining a controllable problem space for student thinking, and supporting discourse among knowledge-building communities of learners (Jonassen 1995, 62).

There is a direct link between technology as context and three of the five approaches mentioned when analysing MC (see Chapter 2.2), i.e., teaching the culturally different, the cultural democracy, and education that is multicultural and that relies on social reconstructionism.

This category consists of tools like case-based learning environments, computer-supported intentional learning environments (e.g., CSILE), anchored instruction, situated learning environments, rich environments for active learning, cognitive flexibility hypertexts, problem-based learning, and mi-

croworlds. It is through these tools, especially when combined with cognitive support like coaching, modelling, and scaffolding, that we can help elevate learners through their zones of proximal development (Vygotsky 1978). (Jonassen 1995, 62)

According to Vygotsky's model of learning (1978), which emphasises the importance of social interaction in language learning and the social environment as an integral part of the process of cognitive change, an individual, in order to get to an upper stage of performance, has to work with a person who has a superior ability structure. We have to bear in mind, however, that cognitive change (the learner realises the phenomenon to be learnt) does not necessarily lead directly to change in behaviour (the learner uses his knowledge to solve real problems). Vygotsky's vision has often been interpreted (cf. e.g., DiPardo & Warshauer Freedman 1988, 144) to suggest a co-operative environment in which power is productively shared, for instance a classroom that could be called a resource room, whose teacher would be a knowledgeable coach and its students one another's colleagues. At best we could say that the action model of an advanced student will get transferred and be used by his pair or his small group and thus ameliorate the group result.

There is evidence in the literature (e.g., Smith 1992; Dede 1995) of the fact that quite a few people feel attracted to co-operative virtual environments as they estimate they can gain something valuable by collaborating together. This feeling of attraction may not be explicitly stated or even conscious; rather, it often appears to be hidden and even altruistic in that people who ask questions and call for help on the Internet either via e-mail or in newsgroups, for instance, are offered help, tips and cues in many ways. Smith (1992; cited in Dede 1995, 47) has epitomised some of the advantages embedded in computer conferencing in three types of "collective goods" that bind together virtual communities enabled by computer-mediated communication, viz.

> (i) social network capital (an instant web of contacts with useful skills),

(ii) knowledge capital (a personal, distributed brain trust with just-in-time answers to immediate questions), and
(iii) communion (psychological/spiritual support from people who share common joys and trials).

Dede even argues (1995, 47) that similar types of inducements to collaboration underlie face-to-face constructivist learning experiences.

6.2 New Educational Opportunities

In short, as far as FLL methodology is concerned, we first witnessed a shift from "drill and practice" software to using computers as tools (word-processors, etc.) in the mid-to-late 1980s, and, more recently, towards an even more open learning environment, in which all sorts of learning tools are fully utilised. The role of a microcomputer has also changed during this process, from an omniscient judge to a many-sided tool (cf. e.g., Tella 1991, 18). A flexible man/machine interface was explicitly needed, taking the learner's individual level of learning into consideration. While "drill and practice" centred software closely resembled a closed language system, e-mail systems, for instance, already represent communication at a much higher conceptual level. In fact, the communicator is very much in a genuine communicative situation at least as long as the teacher understands that the student should be allowed to communicate freely and at his own pace. In this way, metaphorically, the student's learning environment represents an information-rich knowledge-intensive network-based environment, where the communicator can make use of various possibilities, different routes, and options. In fact, three viewpoints are combined: the logical character of man's thinking processes, the contact with the outside world, and the man/machine interface (cf. also Meisalo & Tella 1988, 68–70; Weston-Bartholomew 1991).

Open and distance learning has profited a lot from these developments. It could be said that the new kind of learning environment has essentially changed the teaching/learning

process and made it more versatile and more "virtual", for instance by allowing more independence of time and space. In fact, computer-mediated human communication (CMHC) technology can take students into otherwise inaccessible environments (cf. e.g., Bruce 1989, 243).

From the viewpoint of FLL methodology, computer-mediated human communication has to be contrasted with CALL, on one hand, and with distance teaching, on the other. It is easy to see that open and distance learning (ODL) on one hand and computer-mediated learning on the other share a number of elements, viz. the same kind of equipment can be used, the sender and the recipient need not and will not necessarily meet or see each other, as most communication is taken care of through electronic messaging. On the other hand, learning experiences can resemble each other to some extent. In both forms of learning and communication, interaction with co-learners can contribute to creating a fruitful learning environment. Independent (self-directed) or autonomous work is equally possible. The teacher's role is usually fairly active in distance teaching but when it is being replaced by or at least contrasted with ODL or computer conferencing (one form of computer-mediated communication), teachers tend to become consultants or co-learners, whose earlier status diminish or disappear completely.

Boyd (1987) sees three kinds of new educational opportunities through computer-mediated communications systems. First, *epistemological viewpoints*, connected to *discursive flexibility* facilitated by e-mail systems. The communication on these systems is not restricted in the same way as in mass media in general. Besides, it is bi- or multi-directional (from one/many to one/many), while mass media represent unidirectional communication (from one to many only). When we take the latest developments in technology into account, epistemological discourse flexibility is bound to become even more important. Second, Boyd (1987) refers to *affiliative viewpoints*, which provide learners with new opportunities for peer tutoring and for establishing long-term affiliations between students and their school/teachers, or among stu-

dents. Affiliative viewpoints can also be regarded as essential links between different institutions, not only between individuals. Third, the *physical flexibility* offered by computer-mediated communications systems give new opportunities for students to study in more convenient places and at more convenient times. (Boyd 1987, 150–151) Even if Boyd's classification goes back to 1987 and cannot therefore include all technologies we now have, his main premisses still hold true. Similar viewpoints have been raised by other researchers as well. Jonassen et al. (1995, 17), for instance, speak of e-mail, newsgroups, and computer conferencing supporting the development of *discourse communities*, groups of individuals who share and discuss common interests and goals.

As a matter of fact, there are two sorts of 'technologies', viz. *technological* and *intellectual*. While it is important for FL teachers and teacher educators as well as FL learners to have a fair command of 'technological' technologies as described in this article, it is at least equally important to cope with intellectual tools. Banathy (1995) summarises this need in the following way:

> "The technologies of manufacturing things worked well in managing the organized simplicity of the closed systems production of the 'things world' of the machine age. But those technologies became useless, once we were faced with the organized open systems dynamics of the 'world of complexities' of the new era. In today's world, the methods of creating, organizing, and using information and knowledge are the requisite intellectual technologies." (Banathy 1995, 53)

Other intellectual tools can also be mentioned (cf. e.g., Lin et al. 1995), such as the ability to critical and sustained thinking, and, more generally speaking, to reason about important content as well as the ability and motivation to life-long learning and autonomous study. Jonassen et al. (1995, 20–21) refer to cognitive tools when speaking of computer applications that require students to interpret and organise personal knowledge (learning *with* technology). Rieber's findings (1994; cited in Lin et al. 1995, 59) show that learners'

personal discoveries, possibility to explore, feeling of ownership, and construction of knowledge can help optimise not only intrinsic motivation but also learning proper. In this sense, intellectual tools, technological tools, and learning are deeply intertwined and in close interrelationship with one another.

6.3 The Teacher's Paradox

FLL methodology can benefit substantially from the integration of ME and MC into FL curricula. The special advantage of ME is in providing FL learners with a rich variety of real-life communication tools and genuine communication contexts, which contribute to extending and enhancing or amplifying FL teachers' and learners' human resources. MC, on the other hand, helps both teachers and learners understand better the conditions and intervening factors that otherwise would be likely to hamper cross-cultural communication. It also helps FL learners respect other cultures while underlining one's own cultural heritage.

In this light, Edmondson's notorious paradox (as cited in Ellis 1990, 85) "We seek in the classroom to teach people how to talk when they are not being taught" should be widened to cover out-of-school contexts as well. Besides, instead of speaking of teaching people how to talk, it might be more appropriate to talk of facilitating FL learners to make full use of the different communication channels and tools accessible to them through modern educational applications of media education and through the perspectives of multiculturalism. Perhaps, then, the paradox could be changed into a motto to this effect:

> "We seek in the classroom as well as in the Virtual Learning Space to help FL learners express themselves in a variety of ways made possible by a full integration of media education, multiculturalism, and foreign language learning methodology."

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UNIVERSITY OF HELSINKI
DEPARTMENT OF TEACHER EDUCATION

ISBN 951-45-7588-1
ISSN 1238-9722
Hakapaino
1997

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